AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1-3. (Canceled)

4. (Previously Presented) The method of claim 51, further comprising transferring MIPv6-related information from the AAA server in the home network to a home agent.

5-7. (Canceled)

8. (Previously Presented) The method of claim 51, wherein the MIPv6-related challenge and response messages are incorporated as additional data in an EAP protocol stack.

9. (Previously Presented) The method of claim 8, wherein MIPv6-related information is transferred in at least one EAP attribute in the EAP protocol stack.

10. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred as EAP attributes of the EAP method layer in the EAP protocol stack.

11. (Previously Presented) The method of claim 10, wherein the EAP attributes are EAP Type-Length-Value (TLV) attributes.

12. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred in a generic container attribute available for any EAP method.

13. (Previously Presented) The method of claim 9, wherein the MIPv6-related information is transferred in a method-specific generic container attribute of the EAP method layer in the EAP protocol stack.

14. (Previously Presented) The method of claim 51, wherein the protocol for carrying authentication information for network access is selected from the group of the Protocol for carrying Authentication for Network Access (PANA), IEEE 802.1X, and Point-to-Point Protocol (PPP).

15. (Canceled)

16. (Previously Presented) The method of claim 4, wherein the MIPv6-related information is transferred from the AAA server in the home network to the home agent in an AAA framework protocol application.

17. (Previously Presented) The method of claim 16, wherein the home agent is a local home agent in the visited network and the MIPv6-related information is transferred from the AAA home server to the local home agent via an AAA server in the visited network.

18. (Previously Presented) The method of claim 16, wherein the AAA framework protocol application is an application of a protocol selected from the group of Diameter and RADIUS.

19. (Previously Presented) The method of claim 4, further comprising assigning, by the home AAA server, a home agent to the mobile device; and distributing by the home AAA server to the mobile device and the home agent, credential-related data for establishing a security association between the mobile device and the home agent.

20-21. (Canceled)

22. (Currently Amended) The method of claim 19, further comprising building, at the mobile device, a home address for the mobile device using at least a portion of the address of its assigned home agent; and transferring the home address of the mobile device from the mobile device to the AAA home network server using ~~around~~ a round trip of a selected EAP procedure.

23-30. (Canceled)

31. (Previously Presented) The system of claim 52, wherein the MIPv6-related challenge and response messages are incorporated as additional data in an EAP protocol stack.

32. (Previously Presented) The system of claim 31, wherein MIPv6-related information is carried in at least one EAP attribute in the EAP protocol stack.

33. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in EAP attributes of the EAP method layer in the EAP protocol stack.

34. (Previously Presented) The system of claim 33, wherein the EAP attributes are EAP Type-Length-Value (TLV) attributes.

35. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in a generic container attribute available for any EAP method.

36. (Previously Presented) The system of claim 32, wherein the MIPv6-related information is carried in a method-specific generic container attribute of the EAP method layer in the EAP protocol stack.

37. (Previously Presented) The system of claim 52, wherein the protocol for carrying authentication information for network access is selected from the group of the Protocol for carrying Authentication for Network Access (PANA), IEEE 802.1X, and Point-to-Point Protocol (PPP).

38. (Canceled)

39. (Previously Presented) The system of claim 52, wherein MIPv6-related information is transferred from the AAA server in the home network to a home agent in an AAA framework protocol application.

40. (Previously Presented) The system of claim 39, wherein the home agent is a local home agent in the visited network and the MIPv6-related information is transferred from the AAA home server to the local home agent via an AAA server in the visited network.

41. (Previously Presented) The system of claim 40, wherein the AAA framework protocol application is an application of a protocol selected from the group of Diameter and RADIUS.

42-50. (Canceled)

51. (Previously Presented) A method of authentication and authorization support for Mobile IP version 6 (MIPv6), comprising the steps of:

encrypting Extensible Authentication Protocol (EAP) authentication and authorization information in a mobile device operating in a visited network;

sending the encrypted EAP authentication and authorization information from the mobile device to a pass-through Authentication, Authorization, and Accounting (AAA) client in the visited network utilizing a protocol for carrying authentication information for network access;

forwarding the encrypted EAP authentication and authorization information from the pass-through AAA client to a pass-through visited AAA server in the visited network;

forwarding the encrypted EAP authentication and authorization information from the pass-through visited AAA server in the visited network to a home AAA server in the mobile device's home network;

performing an analysis of the encrypted EAP authentication and authorization information by the home AAA server;

sending a MIPv6-related challenge message from the home AAA server to the mobile device via the pass-through visited AAA server and the pass-through AAA client in the visited network based on the analysis of the encrypted EAP authentication and authorization information;

sending a MIPv6-related challenge response message from the mobile device to the home AAA server via the pass-through AAA client and the pass-through visited AAA server in the visited network;

performing an analysis of the challenge response message contents by the home AAA server; and

sending a MIPv6-related authentication and authorization results message from the home AAA server to the mobile device reporting a result of the analysis of the challenge response message contents and providing session parameter information;

wherein the pass-through visited AAA client and the pass-through visited AAA server forward all messages in a pass-through manner in which Type and Type-Data

header fields are not examined by the pass-through visited AAA client and the pass-through visited AAA server.

52. (Previously Presented) A system for authentication and authorization support for Mobile IP version 6 (MIPv6), comprising a mobile device operating in a visited network, a pass-through Authentication, Authorization, and Accounting (AAA) client in the visited network, a pass-through visited AAA server in the visited network, and a home AAA server in the mobile device's home network, wherein the system performs the steps of:

the mobile device encrypting Extensible Authentication Protocol (EAP) authentication and authorization information;

the mobile device sending the encrypted EAP authentication and authorization information to the pass-through AAA client in the visited network utilizing a protocol for carrying authentication information for network access;

the pass-through AAA client forwarding the encrypted EAP authentication and authorization information to the pass-through visited AAA server in the visited network;

the pass-through visited AAA server forwarding the encrypted EAP authentication and authorization information to the home AAA server in the mobile device's home network;

the home AAA server performing an analysis of the encrypted EAP authentication and authorization information;

the home AAA server sending a MIPv6-related challenge message to the mobile device via the pass-through visited AAA server and the pass-through AAA client in the visited network based on the analysis of the encrypted EAP authentication and authorization information;

the mobile device sending a MIPv6-related challenge response message to the home AAA server via the pass-through AAA client and the pass-through visited AAA server in the visited network;

the home AAA server performing an analysis of the challenge response message contents; and

the home AAA server sending a MIPv6-related authentication and authorization results message to the mobile device reporting a result of the analysis of the challenge response message contents and providing session parameter information;

wherein the pass-through visited AAA client and the pass-through visited AAA server forward all messages in a pass-through manner in which Type and Type-Data header fields are not examined by the pass-through visited AAA client and the pass-through visited AAA server.